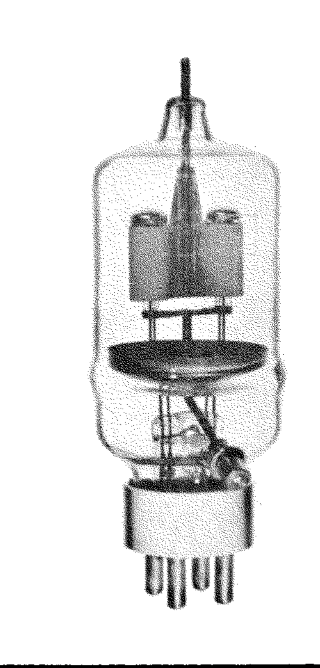


EITEL-McCULLOUGH, INC.
SAN BRUNO, CALIFORNIA

152TL

LOW-MU TRIODE
•
MODULATOR
OSCILLATOR
AMPLIFIER



GENERAL CHARACTERISTICS

Electrical

Filament: Thoriated tungsten
- Voltage - - - - - - - - - - - - - 5.0 of 10.0 volts
- Current - - - - - - - - - - - - - 12.5 or 6.25 amperes

Amplification Factor (Average) - - - - - - - - - 12

Direct Interelectrode Capacitances (Average)
- Grid-Plate - - - - - - - - - - - - - 4.4 $\mu\mu f$
- Grid-Filament - - - - - - - - - - - - 4.5 $\mu\mu f$
- Plate-Filament - - - - - - - - - - - - 0.7 $\mu\mu f$

Transconductance (i_b = 500 ma., E_b = 3000 v., E_c = –85 v.) 7150 umhos

Mechanical

Base - - - - - - - - - - - - - - - - Special 4 pin, No. 5000B
Basing - - - - - - - - - - - - - - - - - - - RMA type 4BC
Maximum Overall Dimensions:
- Length - - - - - - - - - - - - - - 7.625 inches
- Diameter - - - - - - - - - - - - - 2.563 inches

Net weight - - - - - - - - - - - - - - - - 7 ounces
Shipping weight (Average) - - - - - - - - - - 2.0 pounds

Audio Frequency Power Amplifier and Modulator

Class B

	Zero Grid Current Operation—2 Tubes			Typical Operation 2 Tubes			Max. Rating	
D-C Plate Voltage	1500	2000	3000	1500	2000	3000	3000	volts
Max.-Sig. D-C Plate Current, per tube*	•	•	•	•	•	•	450	ma.
Plate Dissipation, per tube*	•	•	•	•	•	•	150	watts
D-C Grid Voltage (approx.)	–105	–160	–260	–105	–160	–260		volts
Peak A-F Grid Input Voltage	210	320	520	500	620	675		volts
Zero-Signal D-C Plate Current	135	100	65	135	100	65		ma.
Max.-Signal D-C Plate Current	286	260	220	570	500	335		ma.
Max.-Signal Driving Power (approx.)	0	0	0	15	13	3		watts
Effective Load, Plate-to-Plate	5100	10500	24000	5500	9000	20400		ohms
Max.-Signal Plate Power Output	130	220	370	560	700	700		watts

*Averaged over any sinusoidal audio frequency cycle.

Radio Frequency Power Amplifier and Oscillator

Class-C *Telegraphy
(Key down conditions without modulation)

	Typical Operation—1 Tube			Max. Rating	
D-C Plate Voltage	1500	2000	3000	3000	volts
D-C Plate Current	333	300	250	450	ma.
D-C Grid Current	45	42	40	75	ma.
D-C Grid Voltage	–250	–300	–400		volts
Plate Power Output	350	450	600		watts
Plate Input	500	600	750		watts
Plate Dissipation	150	150	150	150	watts
Peak R. F. Grid Input Voltage, (approx.)	400	455	550		volts
Driving Power, (approx.)	16	18	20		watts

*The above figures show actual measured tube performance, and do not allow for variations in circuit losses.

EIMAC 152TL CONSTANT CURRENT CHARACTERISTICS

GRID VOLTS

-600 -400 -200 0 200 400 600

PLATE VOLTS

0 500 1000 1500 2000 2500 3000 3500 4000 4500

PLATE CURRENT AMPERES

0 .125 .250 .500 .750 1.0 1.5 2.0 2.5 3.0

GRID CURRENT MILLIAMPERES

600 500 400 300 200 100 50 25 0 25 50 25 0



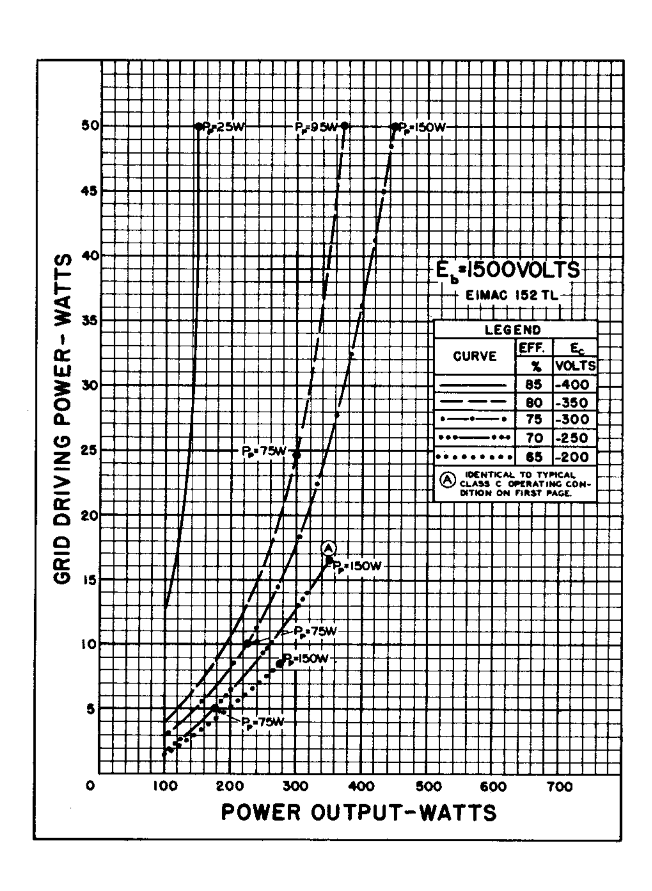
DRIVING POWER vs. POWER OUTPUT

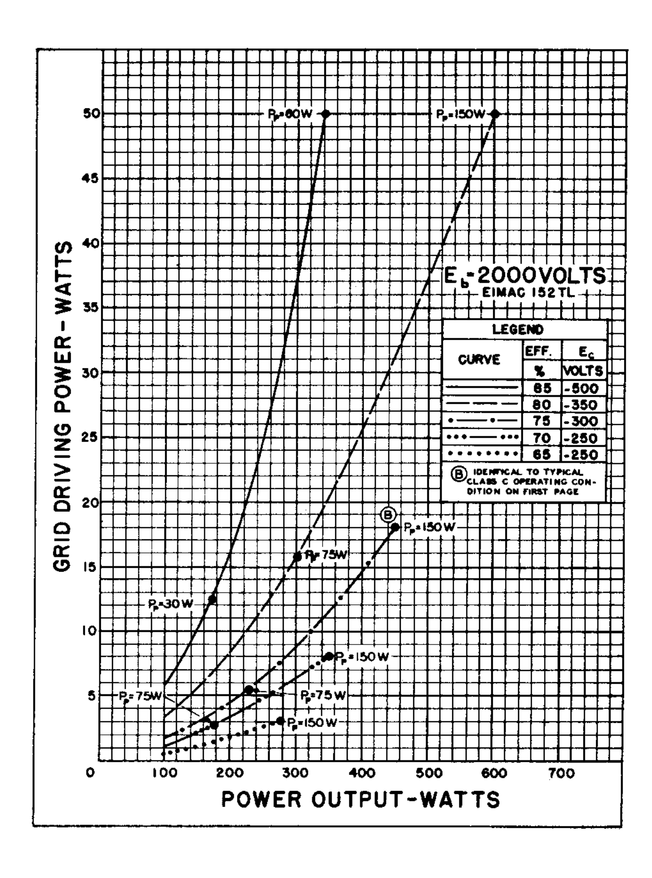
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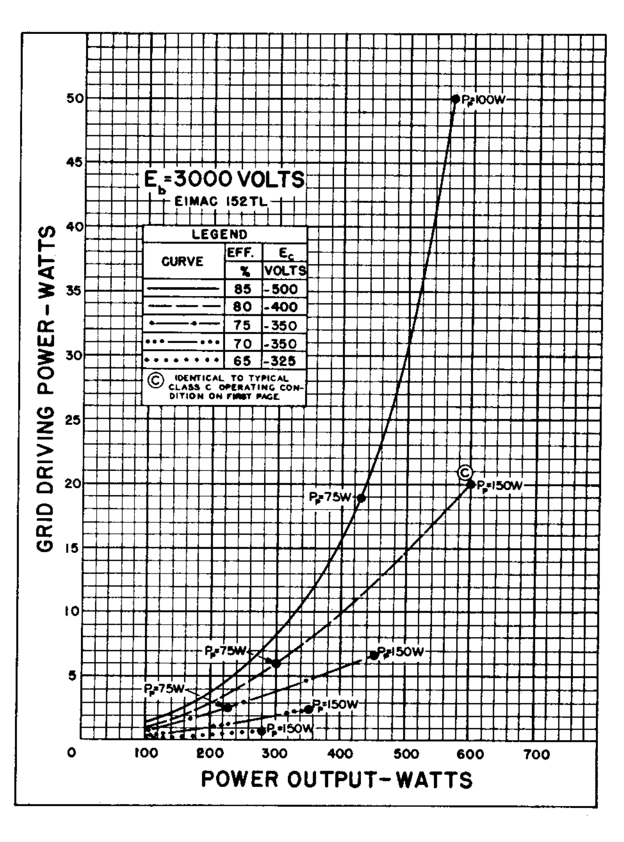
The three charts on this page show the relationship of plate efficiency, power output and grid driving power at plate voltages of 1500, 2000 and 3000 volts. These charts show combined grid and bias losses only. The driving power and power output figures do not include circuit losses. The plate dissipation in watts is indicated by P_p.

Points A, B, and C are identical to the typical Class C operating conditions shown on the first page under 1500, 2000, and 3000 volts respectively.

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.123±.003

7/16 MIN.

PLATE

2 9/16 MAX.

6 11/16 ± 3/16

5 1/2 ± 3/16

3 MAX.

7 7/16 ± 3/16

GRID (4001C)

60°

1 3/4 ± 1/16

BASE NO. 5000B

FILAMENT

FILAMENT

FILAMENT

FILAMENT

4BC

PLATE CAP

(SEE TUBE OUTLINE DRAWING)

GRID CAP
NO. 4001C

.360 +.005 −.010

13/32

1/2

21/64 MIN.

BASE NO. 5000B

7/8

1 19/32

*43/64 MAX.

41/64 MIN.

1/16

1 25/32 MAX.

.249±.002 DIA.
4 PINS

11/16

11/32

13/32

13/16

*ON FINISHED TUBE ADD .060 FOR SOLDER

1-A4-21959